

**Original article:**

## **A Study of Histopathological Examinations of Hysterectomy Specimens in a Hospital at Dehradun Region**

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### **Abstract:**

**Introduction:** Vaginal hysterectomy is performed predominantly for uterine prolapse, whereas abdominal hysterectomy is an indication for mostly menstrual disturbances and fibroids. At present, most of the hysterectomies performed worldwide are through the abdominal route.

**Materials and Methods:** The patients were diagnosed on the basis of history, clinical examination and Ultrasonography reports. The clinical information and the relevant investigations of the patients who underwent hysterectomy during this period were obtained from the histopathological requisition forms and clinical case sheets. The hysterectomy specimens received by the Department of Pathology were properly labeled, numbered and fixed in 10% buffered formalin. After a detailed gross examination of the specimens, multiple bits were taken from representative sites, processed and paraffin blocks were made. The blocks were sectioned and stained routinely with hematoxylin and eosin.

**Results:** A total of 220 hysterectomies were performed during a one-year study period. The hysterectomies were distributed over a large age range of 20 to 70 years. Of these 220 cases 110 (50%), 77 (35%), 22 (10%), and 11 (5%) were encountered in the age group of 41-50, 21-40, 51-60 and 61-70 years which is the most common age group respectively. 82 (37.27%) specimens presented with Leiomyoma uterus followed by dysfunctional uterine bleeding 50 (22.72%), chronic cervicitis 38 (17.27%), pelvic inflammatory disease 25 (11.36%), benign ovarian tumour 16 (7.28%) and endometriosis (external and adenomyosis) 9 (4.10%). Chronic cervicitis was the commonest finding in 176 (80%) cases. 28 (12.5%) Chronic Papillary Endocervicitis, 10 (4.5%) cervical dysplasia followed by 3 (1.20%) condyloma acuminatum, 2 (0.9%) squamous cell carcinoma and 2 (0.9%) Metastasis of adenocarcinoma of cervix were studied.

**Conclusion:** The present study provides a limelight on various histopathological changes in hysterectomy specimens. Hence, it is mandatory that every hysterectomy specimen should be subjected to histopathological examination so as to ensure better post-operative management.

**Keywords:** Hysterectomy, Menstrual Disturbances, Dysfunctional Uterine Bleeding.

### **INTRODUCTION**

The uterus is prone to develop several non-neoplastic and neoplastic conditions during the life time of a woman. The uterus consists of endometrium and myometrium which is under the influence of different hormones periodically. Hysterectomy is the surgical removal of the uterus and is performed by a gynecologist.<sup>1</sup>

Historically Charles Clay performed the first subtotal hysterectomy in Manchester England in 1843 and the first Total abdominal hysterectomy was done in 1929.<sup>2</sup> It is considered as the definitive treatment for various benign pelvic pathologies like leiomyoma, dysfunctional uterine bleeding (DUB), chronic pelvic pain, endometriosis, adenomyosis, uterovaginal prolapse and in some cases of genital tract malignancies.<sup>3</sup> Hysterectomy may be total -removing the body, fundus, and cervix of the uterus; often called complete hysterectomy or partial hysterectomy/subtotal hysterectomy - removal of the uterine body while leaving the cervix intact; also called supracervical hysterectomy. It may also involve removal of the cervix, ovaries, fallopian tubes and other surrounding structures. Histopathological examination of hysterectomy specimens carries diagnostic and therapeutic significance.

According to Dicker, Hysterectomy should be performed when the risk of preserving the uterus is greater than the risk of its removal or when there are disabling symptoms for which there is no successful medical treatment.<sup>4</sup> Surgical mortality rate from hysterectomy is 0.1%-0.2% but morbidity continues to be a problem and sometimes serious post operative complication like urinary extravasations, haemorrhage (in 0.2%-2% of patients) may develop.<sup>5</sup> Morbidity like bladder injury in 2% cases, infection in 10% cases, troublesome vaginal granulations in 10% cases, may develop.<sup>6,7</sup> So, hysterectomy should not be done as prophylaxis against normal cervical cytology or to facilitate hormone replacement therapy to avoid endometrial hyperplasia.<sup>8</sup>

Hysterectomy can be performed by abdominal, vaginal or laparoscopic route and may or may not be accompanied by salpingo-oophorectomy of either one or both sides. Vaginal hysterectomy is performed predominantly for uterine prolapse, whereas abdominal hysterectomy is an indication for mostly menstrual disturbances and fibroids. At present, most of the hysterectomies performed worldwide are through the abdominal route.<sup>9</sup>

## **MATERIALS AND METHODS**

This is a prospective study conducted in the Department of Pathology SGRIMHS. The study was designed to correlate clinical diagnosis of indications of hysterectomy with subsequent histopathological report/diagnosis. The patients were diagnosed on the basis of history, clinical examination and Ultrasonography reports. The clinical information and the relevant investigations of the patients who underwent hysterectomy during this period were obtained from the histopathological requisition forms and clinical case sheets. The hysterectomy specimens received by the Department of Pathology were properly labeled, numbered and fixed in 10% buffered formalin. After a detailed gross examination of the specimens, multiple bits were taken from representative sites, processed and paraffin blocks were made. The blocks were sectioned and stained routinely with hematoxylin and eosin. Special staining methods were used wherever it needed and histopathological diagnoses were correlated with clinical diagnoses.

## **RESULTS**

A total of 220 hysterectomies were performed during a one-year study period. The hysterectomies were distributed over a large age range of 20 to 70 years. Of these 220 cases 110 (50%), 77 (35%), 22 (10%), and 11 (5%) were encountered in the age group of 41-50, 21-40, 51-60 and 61-70 years which is the most common age group respectively which is shown in figure 1. 82 (37.27%) specimens presented with Leiomyoma uterus followed by dysfunctional uterine bleeding 50 (22.72%), chronic cervicitis 38 (17.27%), pelvic inflammatory disease 25 (11.36%), benign ovarian tumour 16 (7.28%) and endometriosis (external and adenomyosis) 9 (4.10%) which is shown in table no 1 and figure 2. Most of the patients presented with menorrhagia; associated

complaints like pain in lower abdomen or dysmenorrhoea and lump in lower abdomen. Cases of dysfunctional uterine bleeding, presented with irregular bleeding per vagina. In pelvic inflammatory disease most cases complained of dyspareunia and dysmenorrhoea.

Chronic cervicitis was the commonest finding in 176 (80%) cases. 28 (12.5%) Chronic Papillary Endocervicitis, 10 (4.5) cervical dysplasia followed by 3 (1.20%) condyloma acuminatum, 2 (0.9%) squamous cell carcinoma and 2 (0.9%) Metastasis of adenocarcinoma of cervix were studied in the present study which is shown in table 2.

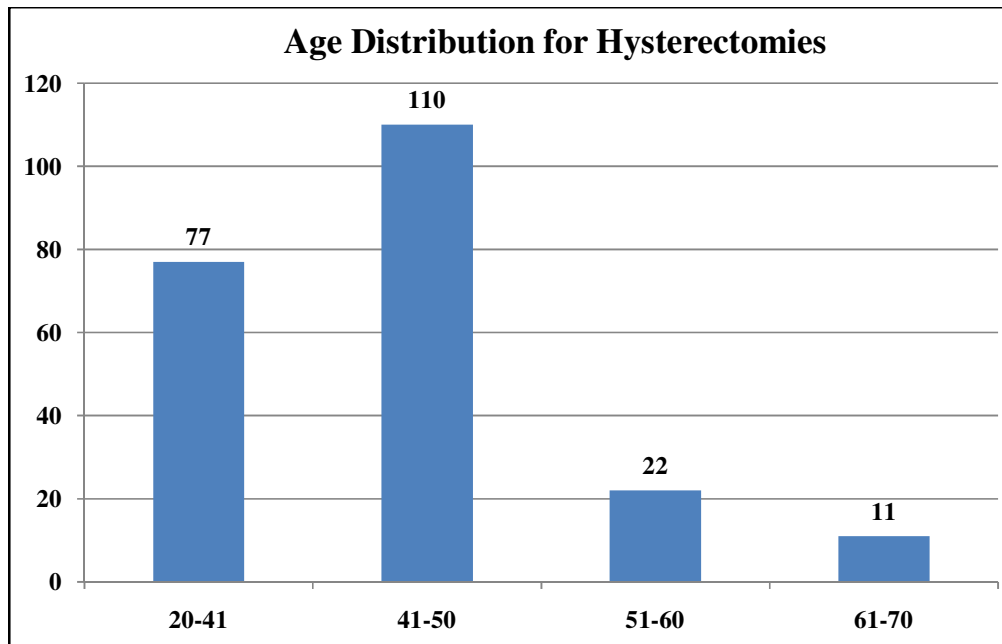


Figure 1: Age Distribution for Hysterectomies

Table 1: Distribution of cases as per peroperative diagnosis.

Clinical diagnosis	Number	Percent (%)
Leiomyoma uterus	82	37.27
Dysfunctional uterine bleeding	50	22.72
Chronic cervicitis	38	17.27
Pelvic inflammatory disease	25	11.36
Benign ovarian tumour	16	07.28
Endometriosis (external and adenomyosis)	09	04.10
<b>Total</b>	<b>220</b>	<b>100</b>

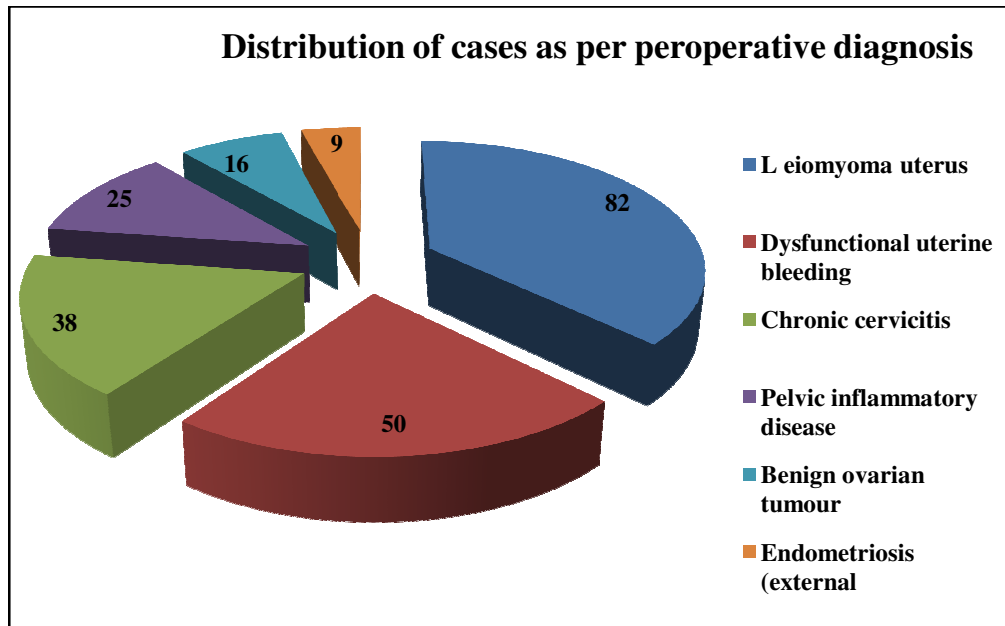


Figure 2: Distribution of cases as per peroperative diagnosis.

Table 2: Histopathological findings in cervix

Cervical Changes	No. of cases	Percentage (%)
Chronic nonspecific Cervicitis	176	80
Chronic Papillary Endocervicitis	28	12.50
Cervical dysplasia	10	4.50
Condylomaacuminata	3	1.20
Squamous Cell Carcinoma	2	0.90
Metastatsis of adenocarcinoma	2	0.90
<b>Total</b>	<b>220</b>	<b>100</b>

## DISCUSSION

Hysterectomy is the most commonly performed major gynaecological surgery throughout the world. It is a successful operation in terms of symptom relief and patient satisfaction and provides definitive cure to many diseases involving uterus as well as adnexae.<sup>10</sup>Hysterectomy is one the common surgical procedures in the peri and post-menopausal women; it is the second most common surgical procedure in the USA.<sup>11</sup>According to the center of disease control and prevention, about five per 1000 women undergo hysterectomy annually year in USA and one in four women will have hysterectomy by the age of 60 years.<sup>12</sup>

The estimated age range of hysterectomy in our study is of 220 cases 110 (50%), 77 (35%), 22 (10%), and 11 (05%)were encountered in the age group of 41-50, 21-40, 51-60 and 61-70 years which is the most common age grouprespectively which is similar to that reported in other studies.<sup>13,14,15</sup>This study included some of the common indications of hysterectomy for example: Leiomyoma, Dysfunctional uterine bleeding, chronic cervicitis, pelvic inflammatory disease.<sup>16</sup>This study included 82 (37.27%) specimenswith Leiomyoma uterus

followed by dysfunctional uterine bleeding 50 (22.72%), chronic cervicitis 38 (17.27%), pelvic inflammatory disease 25 (11.36%), benign ovarian tumour 16 (7.28%) and endometriosis (external and adenomyosis) 9 (4.10%) which is by similar to another study.<sup>17</sup>

Chronic cervicitis was the commonest finding in 176 cases. 10 cases of cervical dysplasia were studied in the present study. It is similar to another study. 3 case of condylomaacuminatum was also studied. 2 case of squamous cell carcinoma of cervix was also seen wich is also similar from different studies.

### CONCLUSION

The present study provides a limelight on various histopathological changes in hysterectomy specimens. A wide range of lesions is encountered when hysterectomy specimens are subjected to histopathological examination. It also provides a correlation with the clinical and preoperative diagnosis and leads to appropriate management in the postoperative period. Hence, it is mandatory that every hysterectomy specimen should be subjected to histopathological examination so as to ensure better post-operative management.

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